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- a buoy for supporting the satellite communications module above water; and
- transmission means for transmitting a signal from the magnetic pig position detector from subsea to the satellite communications module.
- 7. The pipeline monitoring system as defined in claim 1, further comprising:
 - a CPR sensor for sensing one or more of CPR current, CPR voltage, and CPR meter reading and outputting a CPR signal to the satellite communications module.
- 8. The pipeline monitoring system as defined in claim 1, further comprising:
 - a valve actuator responsive to the satellite communications module for controlling operation of a valve.
- 9. The pipeline monitoring system as defined in claim 1, 15 further comprising:
 - a valve position sensor for outputting a valve position signal to the satellite communications module.
- 10. The pipeline monitoring system as defined in claim 1, further comprising:
 - at least one of a pressure sensor and a temperature sensor for outputting a pressure signal and a temperature signal, respectively, to the satellite communications module.
- 11. The pipeline monitoring system as defined in claim 1, ²⁵ further comprising:
 - a flow meter sensor for outputting a fluid flow rate signal to the satellite communications module indicative of fluid flow rate through the pipeline.
- 12. The pipeline monitoring system as defined in claim 1, ³⁰ further comprising:
 - an input/output module for outputting an activity signal to operate the monitoring station in response to the magnetic pig position detector.
- 13. The pipeline monitoring system as defined in claim 12, further comprising:
 - a digital to analog converter for providing signals to the input/output module; and
 - an analog to digital converter for outputting signals from the input/output module to the satellite communications module.
- 14. The pipeline monitoring system as defined in claim 12, further comprising:
 - a digital to analog converter for providing signals to the input/output module; and 45
 - an analog to digital converter for outputting signals from the input/output module to the satellite communications module.
 - 15. A pipeline monitoring system, comprising:
 - a plurality of monitoring stations positioned along a pipeline;
 - a central monitoring facility for generating command signals to operate each of the plurality of monitoring stations:
 - a satellite communications module at each of the plurality of monitoring stations for interfacing with the central monitoring facility;
 - a pipeline marker for housing the satellite communications module; and
 - a pipeline damage detector for outputting a potential pipeline damage signal to the satellite communications module.
- 16. The pipeline monitoring system as defined in claim 15, wherein the central monitoring facility includes a control station to output command signals to the plurality of monitoring stations.

- 17. The pipeline monitoring system as defined in claim 15, further comprising:
 - an input/output module for outputting an activity signal to operate the monitoring station in response to the magnetic pig position detector.
- 18. The pipeline monitoring system as defined in claim 15, wherein the pipeline damage detector includes a pipeline vibration sensor.
- 19. The pipeline monitoring system as defined in claim15, wherein the pipeline damage detector includes a geophone.
 - **20**. A method of monitoring a pipeline having a plurality of monitoring stations, comprising:
 - passing a magnetic pig through the pipeline;
 - detecting the passage of a magnetic pig at each of a plurality of monitoring stations;
 - providing a satellite communications module at each of the plurality of monitoring stations for communicating with a central monitoring facility;
 - outputting a signal from the satellite communications module to the central monitoring facility in response to the passage of the magnetic pig; and
 - generating command signals at the central monitoring facility and forwarding the command signals to the satellite communications module to operate each of the plurality of monitoring stations;
 - detecting potential pipeline damage and outputting a pipeline damage signal to the satellite communications module in response thereto; and
 - actuating a valve in response to the detection of the passage of the magnetic pig.
 - 21. The method as defined in claim 20, further comprising:
 - each monitoring station transmitting data collected at the monitoring station to the central monitoring facility in response to a command signal.
 - 22. The method as defined in claim 20, further comprising:
 - providing a station identification and event time to the central monitoring facility when the magnetic pig is detected;
 - determining the speed of the magnetic pig moving through the pipeline; and
 - estimating the time of arrival of the magnetic pig at another monitoring station.
 - 23. The method as defined in claim 20, further comprising:
 - detecting pipe/soil potentials and outputting a voltage signal to the satellite communications module in response thereto.
 - 24. The method as defined in claim 20, further compris-
 - providing an input/output module for outputting an activity signal to operate the monitoring station in response to the passage of the magnetic pig.
 - 25. A pipeline monitoring system, comprising:
 - a plurality of monitoring stations positioned along a pipeline;
 - a central monitoring facility for generating command signals to operate each of the plurality of monitoring stations:
 - a satellite communications module at each of the plurality of monitoring stations for interfacing with the central monitoring facility; and
 - upwardly extending generally tubular pipeline marker for housing the satellite communications module.

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